ABSTRACT

DIAPHENIA FAUSTINE SILITONGA. The usage of waste water of nila fish Oreochromis niloticus culture on nilem fish Osteochilus hasselti growth cultured with different spreading density. Supervised by KUKUH NIRMALA and LIES SETIJANINGSIH.

The use of nila fish Oreochromis niloticus culture waste water by phytoplankton for nilem fish Osteochilus hasselti culture is needed for the efficiency of water use, land use and feeding in the culture process. This study aims to obtain an optimum nilem fish production from nila fish culture waste water. In this study we used 3.150 amounts of 4 week-old nilem fish, 65 ± 0,62 cm in lengths and 2,24 ± 0,65 in weighs, cultured in 9 concrete ponds for 40 days. Sampling of growth, analysis of water quality, and nilem fish phytoplankton taken in every 10 days. Culture density increase to 75 fish/m$^3$ and FR 1.5% resulting better growth with 7,73 ± 1,30 cm in lengths and 6,31 ± 3,23 g in weight from density 50 and 25 fish/m$^3$. Nilem fish culture in density 75 fish/m$^3$ with the use of waste water is more effective. Nilem fish with spreading density 75 fish/m$^3$ shows higher increase phyplankton abundance than 50 and 25 fish/m$^3$. Phytoplankton abundance from the beginning until the end of culture range about $0,76 \times 10^6$ – $11,46 \times 10^6$ cell/l. Nilem fish Osteochilus hasselti culture with the use of culture waste water can reduce feeding amounts.

Keywords : Nila fish Oreochromis niloticus waste water, nilem fish Osteochilus hasselti, growth, abundance of phytoplankton.